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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,311	02/28/2002	Eiji Saruwatari	04329.2750	6835
22852	7590	06/15/2005	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			MEEK, JACOB M	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/084,311

Applicant(s)

SARUWATARI, EIJI

Examiner

Jacob Meek

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 5, 9 - 13, 19, 20 is/are rejected.
- 7) ☒ Claim(s) 6 - 8, 14 - 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/02, 7/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 - 5, 9 - 13, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ransjin (US-6,275,959).

With regard to claim 1, Ransjin teaches a monitoring apparatus comprising a clock extraction unit (see figure 2, 24), a 1<sup>st</sup> identifier configured to compare received signal with a 1<sup>st</sup> identification level in a phase of the clock extracted by clock extraction unit, a 2<sup>nd</sup> identifier configured to compare received signal with a 2<sup>nd</sup> identification level in a phase of the clock extracted by clock extraction unit (see figure 2, 22 and column 5, equation 9 where determination of  $V_{opt}$  is interpreted as also determining 1<sup>st</sup> and 2<sup>nd</sup> identifiers), an XOR gate to calculate an XOR of identification results of 1<sup>st</sup> and 2<sup>nd</sup> identifiers (see figure 2 and 6, 28), and error rate calculation configured to calculate a code error on the basis of an output from XOR gate and clock extracted by clock extraction unit (see column 5, lines 44 – 58), and a controller configured to control a difference between 1<sup>st</sup> and 2<sup>nd</sup> identification levels (see column 9, lines 13 – 16 where adjustment of  $V_{opt}$  is interpreted as adjusting 1<sup>st</sup> and 2<sup>nd</sup> levels). Ransjin is silent with respect to details of amplitude and noise detection, but discloses that operation is started based on values received from optical receiver (see column 8, lines 24 – 29 where optical amplitude and noise power are interpreted as being included in this list). It would have been obvious to one of ordinary skill in the art at the time of invention to include

amplitude and noise power measurements in view of Ransjin's disclosure regarding noise energy (see column 1, lines 39 – 44).

With regard to claim 2, Ransjin teaches an apparatus further comprising a low-frequency signal source configured to output a low frequency signal, an average value of which is 2<sup>nd</sup> identification level to 2<sup>nd</sup> identifier, and wherein controller controls an effective value of low frequency signal output from low frequency signal to be based on amplitude and noise levels (see column 5, lines 44 – 58). Ransjin is silent with respect to details amplitude and noise ratios. Ransjin does teach that a variety of techniques could be used to implement his adjustment technique. It would have been obvious to one of ordinary skill in the art at the time of invention that various ratios could be applied to accomplish monitoring of line quality.

With regard to claims 3 – 5, Ransjin is silent with respect to use of differing waveforms. Ransjin discloses there are a variety of techniques for the analysis and adjustment of signal quality (see column 1, lines 52 – 61).

With regard to claim 9, Ransjin teaches a monitoring apparatus with the limitations of claim 1 above, plus the additional limitation of variable gain control (see column 8, lines 19 – 23 where this is interpreted as equivalent).

With regard to claims 19 and 20, the steps claimed as method are a restatement of the apparatus of claims 1 and 9, respectively and are similarly analyzed.

### ***Allowable Subject Matter***

2. Claims 6 – 8, 14 – 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Other Cited Prior Art***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. NPL references disclose various optical receiver architectures. Jessop (US-5,425,033), Khaleghi (US-6,008,916 & 6,069,718), Kunito (US-6,246,499), and Barker (US-6,513,136) all disclose techniques and apparatus germane to applicant's invention.

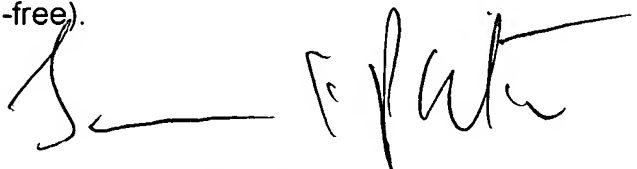
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM



JAY K. PATEL  
SUPERVISORY PATENT EXAMINER